

Claims

[c1] WHAT IS CLAIMED IS:

1. A camshaft adjusting device for internal combustion engines of motor vehicles, the device comprising:
an intake camshaft adjuster and an exhaust camshaft adjuster driven by an endless drive connected to a crankshaft;

wherein the intake and exhaust camshaft adjusters are connected by a gear transmission to one another.

[c2] 2. The device according to claim 1, wherein a first one of the intake and exhaust camshaft adjusters comprises a drive wheel and a gear forming a part of the gear transmission, wherein the drive wheel and the gear are positioned axially adjacent to one another.

[c3] 3. The device according to claim 2, wherein the first one of the intake and exhaust camshaft adjusters further comprises a spacer member, wherein the drive wheel and the gear are separated from one another by the spacer member.

[c4] 4. The device according to claim 2, wherein the gear is a monolithic part of a stator of the first one of the intake

and exhaust camshaft adjusters.

- [c5] 5. The device according to claim 2, wherein the drive wheel is fastened on the gear.
- [c6] 6. The device according to claim 2, wherein the drive wheel is a chain wheel.
- [c7] 7. The device according to claim 2, wherein the drive wheel is provided with at least one positive-locking element and wherein the first one of the intake and exhaust camshaft adjusters has at least one counter locking element interacting with the at least one positive-locking element for radially aligning the drive wheel and the gear.
- [c8] 8. The device according to claim 7, wherein the positive-locking element is a radial projection on an inner side of the drive wheel.
- [c9] 9. The device according to claim 7, wherein the counter locking element is an axial groove in a wall of a stator of the first one of the intake and exhaust camshaft adjusters.
- [c10] 10. The device according to claim 2, wherein the drive wheel belongs to the exhaust camshaft adjuster.
- [c11] 11. The device according to claim 1, wherein the intake

and exhaust camshaft adjusters each have a gear forming a part of the gear transmission.

[c12] 12. The device according to claim 11, wherein the intake and exhaust camshaft adjusters are directly drivingly connected by the gears.

[c13] 13. The device according to claim 12, wherein the gears have identical diameter.

[c14] 14. The device according to claim 11, further comprising an intermediate shaft provided with a common gear wheel fixedly connected to the intermediate shaft, wherein the gears of the intake and exhaust camshaft adjusters engage the common gear wheel.

[c15] 15. The device according to claim 14, wherein the intermediate shaft is drivingly connected to the endless drive.